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XXII.—FACE-GUARD FOR SMELTERS.

The Sum of Five Guineas was this Session presented to Mr. J. CALLAGHAN, Carlisle Lane, Lambeth, for his FACE-GUARD FOR SMELTERS; one of which has been placed in the Society's Repository.

MR. CALLAGHAN's Guard is intended to preserve the face, and particularly the eyes, of smiths, founders, stokers, and others, from being injured either by the heat of the furnace, or of red-hot or melted metal, or by fragments of metal dispersed on all sides, in the action of hammering.

The guard is of two forms, either a veil, as it were, of iron wire gauze of a curved form, and fastened by a hinge to the front part of the hat, or a mask, more or less complete, with the eye-holes covered with wire gauze.

There is not much novelty in the invention; spectacles of wire gauze are already in use, and eye-guards, fastened by a band round the head, have been employed by persons engaged in breaking stones for the roads.

It does not, however, appear that founders, stokers, and others, whose eyes are much exposed to radiant heat from burning fuel or melted metal, are in the habit of using any precaution to protect their eyes. It appears from the concurring testimony of engine-makers, master founders, and others, members of the Society, that the eyes of persons in their employ are often seriously injured from the above-mentioned causes. J. Callaghan is himself a workman, and the Society have rewarded him in hopes that his fellow-labourers may be induced to avail themselves of the invention of one of their own comrades, though they would probably neglect the very same contrivance, if offered to them from any other quarter.

CERTIFICATES.

Bridge-road, Lambeth,
January 10, 1827.

This is to certify that I have had Joseph Callaghan's face-guard tried at the forge and at the air furnace in my father's manufactory, in one instance in forging a spindle of eleven hundred weight, and in the other, in dipping metal from the air furnace; and on both occasions the men expressed their surprise at the trifling heat which they felt upon their faces; and I do not hesitate to assert, if the description of men above-mentioned would use these guards at an early stage of their profession, they would have their eye-sight wholly unimpaired for many years.

CHARLES COLLINGE.

Foundry, Blackfriars-bridge,

SIR; January 16, 1827.

We have tried your fire-guard, and find it to answer every purpose of protecting the face and eyes from the effects generally produced by excessive: heat though simple in its construction, yet we consider it to merit the warmest approbation of

Your's, &c.

Mr. Callaghan.

WARD AND AINGER.